New Ability Invigorated by ICT and Changing Hegemony in Bringing Up Educated Humans: A Historical Reflection

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Abstract: The aim of this paper is to discuss the changing ideals of ability to be educated in relation to information and communication technology (ICT) applied to tertiary educational spaces. It also examines whether such changes have marginalized students' capabilities once they become accepted institutional practice. As a result of the development of higher learning since the Meiji restoration, Japan has achieved relatively high standards of «universities for all». Along with this expansion in higher education, Japan has institutionalized diverse learning opportunities. This paper discusses the changes that have been made to skills training in higher education, especially after the introduction of ICT into tertiary learning from the 1980s. First, the author examines the theoretical assumptions of problem setting in this paper, setting out the discussion of «the multitude». Second, there is a review of the historical transition of the concept of skills that university students should acquire. Third, the author describes to what extent the «new concept of ability» has been introduced into the university curriculum, especially in the relationship with the digital environment. Finally, to examine how the above historical background and discussions have been accepted as an effective and practical concept, the author conducted qualitative analysis of several universities' syllabi data. Through this process, the author considered what aspects of «institutionalized value» (Illich, 1977) occur in the name of skills appropriate to the ICT/AI age. In addition, the author seeks out university attempts to create «commons» in which academic society endeavours to maintain critical and practical potential that forms the general intellect.

Keywords: Higher Education; Non-specialized Education; Information Communication Technology; New Concept of Ability; Cognitive Capitalism; The multitude; Commons.

## 1. Social Background and Structure of this Paper

This paper discusses the changing ideals of educated ability in relation to the changing balance of the mode of education and in relation to information and communication technology (ICT) applied to the tertiary educational space. It

examines what kind of ability/skill is going to be institutionalized and what is oppositely marginalized, especially in the context of university nonspecialized education, that is, liberal arts, general education, core curriculum/education, and the career education introduced around 2008 to cultivate competencies that fit the hyper ICT world.

The author chose nonspecialized education because, depending on the social situation, it has been vulnerable historically and become a target of reformation. Turning that around, in nonspecialized education's content, the author believes that portions of reformation or the distance between the university and society in that era tend to appear, instead of fields comparatively restrained by academic discipline. Additionally, nonspecialized curricula's dismantling and reformation overlap myriad discussions about the function of the university itself, especially as the apparatus of a «medium» to transmit proper behavior and establish a sophisticated disposition. Since the late 1990s, changes brought on by ICT have influenced nonspecialized education and emerged as a significant factor affecting the character of intellectuality.

Since the late 1990s, ICT has become deeply diffused throughout ordinary Japanese life. Data from the Ministry of Internal Affairs and Communications shows that in 2016, 83.5% of Japanese people had connectivity to the Internet (Figure 01; MIC, 2016, http://www.soumu.go.jp). As Figure 01 shows, almost all Japanese people in their 20s use some social networking service (SNS) in their everyday life. Especially since Web 2.0 began around the mid-2000s, unspecified people on the Internet recognize themselves as active contributors and actively engage in the development of technology, not regarding themselves as passive service recipients (Umeda, 2006, p. 120). This also means that ICT becomes partly the function of the opportunity Web that Illich conceptualized in the late 1970s. ICT is an environment relativizing legitimate theory prescribed by various powers, particularly authority constructed in the context of modernity.

Figure 01. Amount of population who can use the Internet, a smartphone, a tablet, and SNS
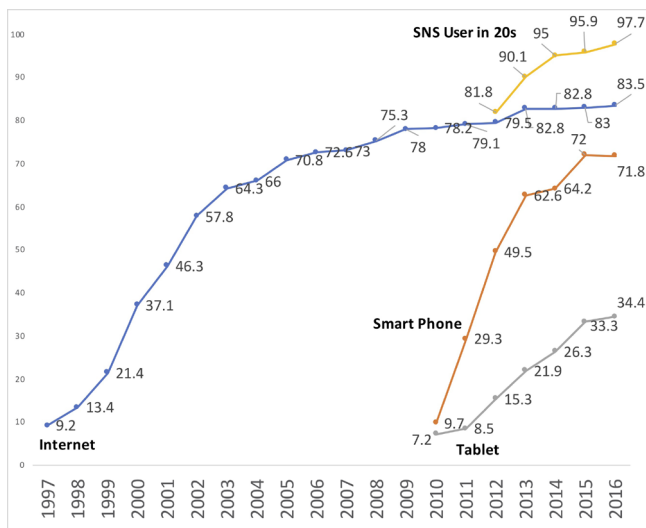
However, discussions of introducing ICT into Japanese education are still preoccupied with how to improve learning's efficiency and with assuming maintenance of the existing hegemony developed in the modern formal educational system. Among those involved in university education, this situation shows lack of understanding of the new globalization's features. Accelerated by ICT, the new globalization has overwhelmed the long-term fundamental structure of higher education's authority to transmit a nation-state's legitimized knowledge.

Vividly describing Old and New Globalization, Baldwin asserts that globalization differs completely before and after the spread of ICT in society. In his book, Baldwin drew this transition on a magnificent scale, including the B.C. era, so as to glimpse features of changes brought about by ICT through the macroeconomic lens. However, the most important point appears in this statement: «The New Globalization's impact is also more individual in the sense that the winners and losers are no longer mostly grouped by sectors and skill groups» (Baldwin, 2016, p. 11). The statement suggests that we must reconsider the traditional viewpoint. For example, the attitude of trying to analyze and understand educational advantages and disadvantages with fixed statistical categories used in explanation of habitus and, as a consequence, a class or hierarchy being configured to have a comparative advantage in modern society. These proofs might temporarily convince us, but they will soon be invalid because digital communication destabilizes category borders more than we imagine.

Many university stakeholders share this sense of crisis, which has influenced Japanese university education more than a little, and the trend seems to have especially influenced nonspecialized education. In this paper, therefore, the author investigates what vectors are injected into nonspecialized education (including some career curricula), which aims to acquire both dispositions and abilities to get along well with the hyper ICT world.

The discussion proceeds as follows. First of all, preceding the discussion, the author refers to the notion and arguments related to «the multitude». This perspective is very important in suggesting nonspecialized education's discontinuity before and after the late 1990s. Secondly, from historical and political perspectives beginning in the Meiji era, the author briefly reviews nonspecialized education's introduction into Japanese universities. This includes overviewing the structure of Japanese university education, enrollment numbers, and changes to political policies surrounding university education in Japan. Along with this overview, also reviewed are social changes entwined with the ICT revolution during the last quarter century.

Thirdly, the author addresses new learning methodologies related to instilling ICT in education, which appeared during the 2000s. In Japan, especially those in charge of pedagogy for higher education and educational technology are in the main corresponding academic fields promoting active reformation. From these new trends in higher education, for instance, the invigorated ability (outcomes) obtained by nonspecialized educational learning and the notion of «New Concept of Ability» are addressed. From these arguments, the author outlines what elements will be legitimized – for what and for/by whom.

Next, to examine how the historical background and discussions above are accepted as an effective and practical concept, the author conducted qualitative analysis of several universities' syllabi data. Through this process, the author

considered what aspects of «institutionalized value» (Illich, 1977) occur in the name of ability appropriate to the ICT/AI age. In addition, the author seeks out university attempts to create «commons» where academic society endeavors to maintain critical and practical potential that forms the general intellect.

2. Third Capitalism and Academic Labor

After the post-Fordism world, production's main capacities began to be affected by the amount of immaterial labor rather than natural raw materials (Perters & Ergin, 2011, p. XXXII). Especially since digital communication now promotes immaterial labor, a new shape of capital is called «third capitalism» or «cognitive capitalism» (Perters & Ergin, 2011, p. XXXII). Peters and Ergin stated, «The characterization of cognitive capitalism rests on an analysis of immaterial labor based on networked mass participation and collaboration rather than traditional Smithian division of labor» (Perters & Ergin, 2011, p. XXXIII). This statement implies that the border between «production» and «the other» has blurred. Cognitive capitalism is going intensely to enclose our life itself, for instance, portions that used to belong to the «private» and «informal» learning sphere. In this environment, mobilizing immaterial labor is the main force; «public universities, community and schools become the public infrastructure for knowledge capitalism (Perters & Ergin, 2011, p. XXXIII)».

The boundary that previously characterized the academic world is also disappearing since the new globalized economy transformed its main battlefield into immaterial labor. Shukaitis sees parts of this phenomenon in students' attitudes:

> The vast majority of university students entering the college classroom today have been engaged in some form of labor, even if they have never held a waged job, precisely because of the ubiquity of these modalities of free work in media network and communication; … they are always already enmeshed in state work as they mold their subjectivity according to the needs of post-Fordist capitalism, self-organizing and producing without being commanded, being invested in their own self-production with no guarantees attached (2017, p. 12).

In Japan, many critiques from higher education observed that university students became just the target of neoliberalism's exploitation – nothing to do besides mass marketize individual skills so as to sell students' ability by the piece. But it goes without saying that right in the same stream, that is, in the stream of immaterial labor, an alternative counter-hegemony also occurred. The notion of «the multitude» that took over the Autonomist of Marxist theory proposes an argument on metamorphosis of the «general intellect» in the digital age. According to Vilno, «the multitude» use «general intellect» as their «commons», in order to struggle with being omni-laterally exposed to globalization. Vilno defined characteristics of «the multitude» as follows: «The contemporary multitude is composed neither of "citizens" nor of "producers", it occupies a middle region between "individual and collective", for the multitude, then the distinction between "public" and "private" is in no way validated» (Vilno, 2004, p. 21).

From the explanation above, we might imagine that open source projects, in which philosophy prefers to disclose a program code, is one form of «the multitude», but, notably, «general intellect» possibly emerges and knits wherever human beings use language communication, although hackers are considered a technological elite.

As Vilno said, «the multitude» aspires to «commons» instead of «public» and «private», which are previously valid terms for explaining modern production theory; their activities cannot be explained by political and economic discourses composing modernity. In that sense, «the multitude» is the polar opposite of «the people» considered an element configuring nation-states (Vilno, 2004, p. 21). This suggests that fixed categories created inside and outside any event are going to be partly invalid for capturing contemporary society, because the «multitude have a habitus which do not possess habitus» (Vilno, 2004, p. 21). «The multitude» seems an elusive, anonymous crowd of people, but Negri separates «the multitude» and other concepts designating plural collectives, for example, «the crowd», «the masses», and «the mob» (Negri, 2004, pp. 99-100) because «the components of the masses, the mob, and the crowd are not singularities – and this is obvious from the fact that their differences so easily collapse into the indifference of the whole. Moreover, these social subjects are fundamentally passive in the sense that they cannot act by themselves but rather must be led» (2004, pp. 99-100).

While adopting the arguments of «the multitude», the author would like to explore in what sense and how Japanese higher education can be a learning «commons». This connects to a query about whether Japanese universities have the disposition to relativize cognitive (digital) capitalism's new power. This also connects to query about whether Japanese universities function as more than something merely to produce «objects» to be a purchasing target for new capitalism.

This viewpoint becomes very important, especially from the latter part of this paper. First of all, however, the author reviews nonspecialized higher education's introduction, in order to provide better understanding of the social background surrounding Japanese university education.

## 3. Historical and Demographic background of higher education in Japan

The first university in Japan was founded in 1877 (Tokyo University), nine years after the Meiji Restoration. During the Meiji Era, Japan earnestly pushed forward modernization. Eight imperial universities and approximately 40 public and private universities were founded by the end of World War II (1945) according to the data of the Ministry of Education, Culture, Sports, Science, and Technology (www.mext. go.jp). Due to the school reform after WWII, referring to instruction in the United States, in 1946, the Japanese government structured a new educational system, the «6/3/3 system» that defined 6 years for elementary school, 3 years for junior high school, and 3 years for high school. The 9 years from elementary school to junior high school constitutes compulsory education[1].

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[1] According to MEXT data, the rate of enrollment is almost 100%. It is also reported that the rate of high school enrollment is over 96% (Ibid.). But this score is calculated only for Japanese children, and children from abroad are not counted.

Owing to this reform, higher education was also forced to change. Originally, Japanese universities had various school types, such as imperial university, vocational school, and higher normal school and high school, but these were bundled into a unified single-track system (Kitamura, 1999, pp. 160-161), which ordinarily offered 4-year undergraduate course. Universities that used to have various characteristics of education were changed to fit a single institutional model and theoretically had to pursue the same common objectives and serve the same functions (Ibid). Japanese universities have operated ever since according to the form of higher education endorsed by the U.S. General Headquarters.

After WWII, the number of universities dramatically increased, reaching 201 in 1950. That number had more than doubled by 1973 (405 universities) and tripled by 1998 (604 universities), and as of 2017, it was reported that 780 universities exist in Japan (www.mext.go.jp). The percentage of 18-year-olds going to university has also increased. The blue mountain in Figure 02 shows the population of 18-year-olds, and the red line shows the college admission rate. As the graph shows, while the denominator (18-year-old) decreased starting in 1992, the rate of those going to university increased, especially from 1989. According to Yoshida, the post-war period in Japan can be divided into four different periods, as the blue line in Figure 02 shows (Yoshida, 2013, pp. 268-269). To see the data, the ratio of those going to university increased sharply from 1960 to 1976 (2nd period), and it more than tripled from 1960. From 1976 to 1991 (3rd period), the momentum subsided, not exceeding a 30% admission rate, but after 1991 (4th period), the college admission rate again started to increase and now it exceeds 50% (Figure 02).

Figure 02. Transition of 18-year-olds and college admission rates in Japan
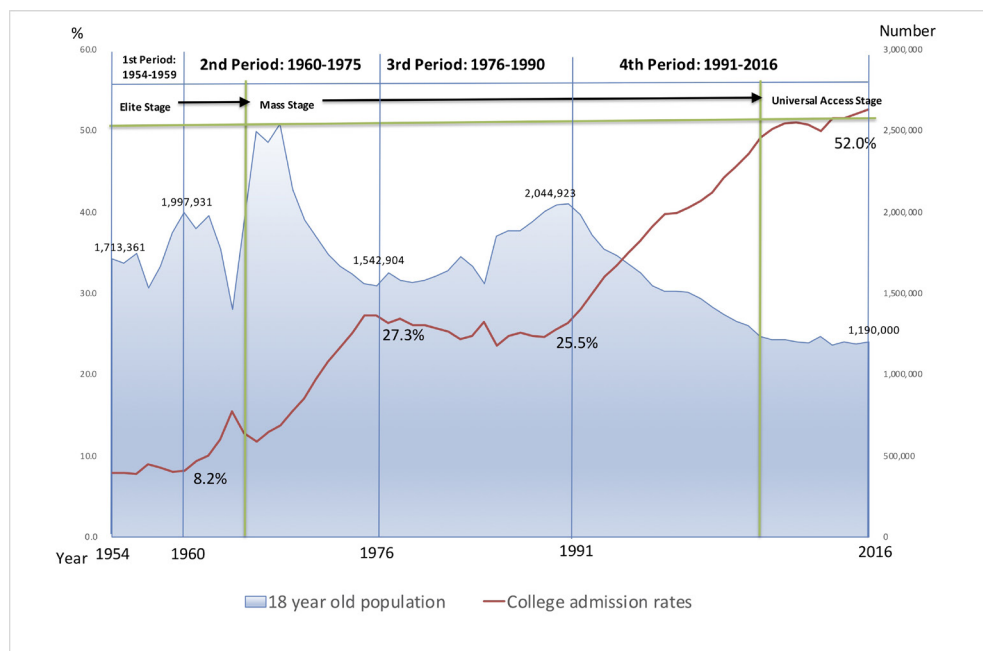
On the other hand, if we follow the famous Martin Trow Model (Trow, 1974, pp. 188-195), as the green line in Figure 01 shows, Japanese universities were in the elite stage until around 1965, which means under 15% of 18-years-old entered university. This was followed by a stage of massification (from about 1965 to 2008), which means 15%-50% of 18-years-old entered university. Currently, Japan is seeing a universal access stage (over 50% university entrance rate)[2].

Through the transition above, the role of the nonspecialized curriculum, such as Japanese type of general education or liberal arts education changed. In addition, new categories like career education to foster global competencies appeared officially around 2008. This transition illustrates the university's changed role. Now, although the nonspecialized curriculum in Japan mainly translates into a core curriculum, the liberal arts, or general education, its characteristics have been unstable. However, examining historical transitions is very important for knowing the each period's goal.

4. Introduction of Nonspecialized Education to Japanese Universities

Yoshimi described that the German university's concept of *Bildung* was imported into Japanese universities in the Meiji era, the nineteenth century (Yoshimi, 2016, p. 82). *Bildung* was translated as *Kyōyō* in Japanese. Because the construction of early universities paralleled the construction of the modern nation state, the idea of *Kyōyō* was formed to develop the national normative culture to be shared by elite students (Yoshimi, 2016, p. 82). Because the aim of *Kyōyō* was to embody a modern national sense of sharing among elite students through university education, the contents of knowledge or the shared culture itself were very important aspects, which had the nature of not crossing over the national border (Yoshimi, 2016, p. 82). The aim of *Kyōyō* imported from Germany around the mid-nineteenth century was the cultivation of elites responsible for the administration of the nation state. The university system from the Meiji era to before WWII ended is called «old-education-system universities», and now, it is equivalent to junior, senior, and master's level university students.

With the school reform that introduced the 6/3/3/4 system after WWII, the university's joint undergraduate program undertook both a two-year core curriculum from high school under the old system and two-year specialized curricula for academic disciplines; this system continued until 1991 (Kitamura, 1999, pp. 160-161). Requiring this combination led to conflicts between faculties who were in charge of the core curriculum and those who were responsible for specialized curricula (Kitamura, 1999, pp. 160-161) for a long time.

In this confusion after WWII, the concept of general education was imported from the United States. It is said that Nanbara Shigeru, who was the president of Tokyo University, purposely adopted the concept of general education to implement the new university system in Japan (Kitamura, 1999, pp. 160-161). Called *Ippankyōiku kamoku*, the new system includes both elements of *Kyōyō* imported from Germany in the Meiji era and the new concept of general education imported from the United

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[2] Since 76% of Japanese universities are private, the development of private universities contributed to the increased number of university students.

States. *Ippankyōiku* imported from the United States included a wide range of basic educational needs; its structure consisted of three major fields of human thought – humanities, social science, and natural science. The ideal was to take an equal balance of courses from these three fields (Yoshimi, 2016, p. 90).

The aim of the Japanese version of general education, *Ippankyōiku*, was to educate citizens to promote democratization. However, *Ippankyōiku* seemed to lack full apprehension of the Japanese context (Yoshida, 2013) because democratization was just a watchword in the initial post-WWII stage. In Japan, the U.S. concept of general education, which aimed to cultivate students' ability to synthesize their existing knowledge from individual disciplines, was not effective.

5. Transformation of *Ippankyōiku*'s Meaning: From 1960s to the Early 1990s

Around the 1960s, Japan entered a period of high economic growth. In examining the development of telecommunication in the second period (1960-1975; Figure 01), it is relevant to consider the theory of de-industrializing society advocated by Bell and Umesada et al. around the 1960s. This theory prospected that social production would change from the provision of goods to services (1962). In addition, «informatization» (Masamura, 2003, p. 23) was mentioned at the earliest stage in this period. In such social situation, the structure of *Ippankyōiku* changed so that students could choose subjects of their own interest, without having to take subjects in equal balance from the three major fields of humanities, social science, and natural science (1963). This change was made by listening to the needs of the industrial world in Japan. As Yoshimi described, the initial concept of *Ippankyōiku*, i.e., Japanese version of general education that Nanbara imported from the United States disappeared substantially in 1963 (Yoshimi, 2016, p. 90).

Around the 1960s, when the high economic growth started, people's desire to enter university increased because holding a degree, especially from a famous university, strongly affected future promotion in the workplace. As the difference between the 18-year-old population around 1960 and the college admission rate shows (Figure 01), university education was narrow gate, but those who want to get career advancement overflew the exam market. A collective desire to rise the social status evoked the fierce competition system of university. Therefore, entering university was regarded as a «social birth» accompanied by great pain (Amano, 2006, p. 203). The strong pressure of entrance examinations cultivated the dispositions of diligence, self-restraint, obedience, and subordination (Ibid), and it is said that the authorities of the time intended to create this structure to nurture these specific traits (Amano, 2006, p. 203).

After that, during the 1970s, the keywords «informatization» and «the information society» were accepted and diffused throughout Japanese society (Haruki, 2004, p. V-vi). From the 1970s, the economy's axis gradually moved from mass production of goods to production of intangible service, which means a large volume of capital was invested to produce valuable nonmaterial «information as part of a systematic effort» (Imai, 1984, pp. 34-35). In this social situation, *Ippankyōiku* prioritized fostering the ability to cope with a complex, advanced society, and «educating citizenship», a term

from the initial stage, was no longer mentioned (Yoshida, 2013, p. 273). A 1971 report by the Central Council for Education declared that *Ippankyōiku* changed into the introductory subjects required prior to specialized subjects (Yoshida, 2013, p. 273). From this point, *Ippankyōiku* strengthened its characteristics as a nonspecialized subject.

During the 1980s, telecommunication progressed, and the second deregulation of communication channels was done by the revised Public Telecommunication Law in 1982. Through this deregulation, data communication among companies was liberalized and the government was not able to restrict the joint use of telecommunication lines between companies (Fukuda, 1996, p. 89). In this social change, the discussion that evaluated informatization from the viewpoint of expanding individual free communication and forming a new network was promoted (Yoshida, 2000, p. 25). In Japan, from the late 1980s to the early 1990s, individuals started to use personal computers. However, closed networks were used to connect specific participants who had access to specific computers. Also, since the cost of personal computers was expensive[3], accessibility was limited. Thus, Nishigaki has said that provision of infrastructure was promoted one-sidedly, based on technological and economic orientations rather than on building the network in the 1980s real, living world (2003, p. 18). Importantly, mainframe computers applied a centralized structure. Because of this, discussion of the information society centered on mass communication theory and a society of computer management, arguing how television, radios, and personal computers in the workplace influenced industrialized society (2003, p. 18).

From the mid-1980s, universities promoted individualization and liberalization of education. Nonspecialized education's characteristics (core curriculum, liberal arts, or general education) shifted gradually from knowing and/or acquiring specific knowledge to cultivating abstract ability, such as *Rikai-ryoku* (ability to understand things and affairs correctly), *Bunseki-ryoku* (ability to analyze things and affairs correctly), and *Shikō-ryoku* (ability to ponder) (Yoshida, 2013, p. 277). This means that these curricula's aim changed from knowing something itself to acquiring methods of learning and/or updating knowledge. From the late 1990s, this movement was linked to emergence of the new concept of ability.

The early 1990s was the era after the burst of Japan's economic bubble (from about 1991 to 1992) and the employment of the younger generation became an issue. Additionally, deregulation of the University Act in «Standards for the Establishment of Universities» came into effect in 1991. Based on this act, regulations dividing *Ippankyōiku* and specialized education were abolished (Yoshimi, 2016, p. 91). This means individual universities can decide allocation of nonspecialized curricula (*Ippankyōiku*) and specialized or professional curricula. Consequently, many universities decided to change direction – increasing specialized curricula and reducing nonspecialized curricula. In university reform after the 1990s, the concept of competencies and a core curriculum aiming at fostering specific skills appeared in university education (Yoshimi, 2016, p. 91). These core skills, targeting those

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[3] It costs approximately 3-4 times more than now.

deemed useful for specific occupations, are generically included in the new concept of ability.

6. New Concept of Abilities and New Learning Methodologies

The new concept of ability is a general term collectively conceptualized during the late 1980s and especially during the 1990s. It is often combined with «generic-key-core» as a prefix and «skills-competencies-qualifications» as a suffix (Matsushita, 2011, p. 39). After the launch of globalized society, these abilities were widely adopted in economically developed countries (Matsushita, 2010, p. 2). The new concepts of ability were imported to Japan during the late 1980s as part of postmodern ability. Matsushita pointed out that from the 1960s to the 1980s, the abilities tested in the university's entrance examination positively correlated with the abilities that working persons need. But after the mid-1990s, some indicated that abilities, especially those evaluated in the university entrance examination, did not correlate to the needs of the labor force.

In this situation, with the new concept of ability, competencies were often referred to and introduced into university education. Competencies represent the abilities widely required for the workforce, which include motivation or characteristics such as an obedience, straightforwardness, and a positive personality (Matsushita, 2010, pp. 25-26). Many of these were promoted in the practice or lecture of nonspecialized curricula, for instance, the core curriculum, liberal arts, and the career design program, or first year experience, for many of which *Ippankyōiku* changed the form. Table 01 shows the new concept of ability targeting higher education and vocational education in Japan (Table 01 was created by the author referring to Matsushita, 2010).

Table 01. New Concept of Ability Targeting Higher and Vocational Education

Name	Institution/Program	Year
Vocational Basic Ability (*Shūgyō-kiso-nōryoku*)	Ministry of Health, Labor and Welfare; Youth Employability Support Program	2004
Fundamental Competencies for Working Persons (*Shakai-jin-kisoryoku*)	Ministry of Economy, Trade and Industry	2006
Graduate Competencies (*Gakushi-ryoku*)	Ministry of Education	2008
Employability (*Koyousareuru-nōryoku*)	Japan Business Federation	1999

Various ministries established these abilities, but their common features are cognitive abilities and holistic abilities deeply related to personality (Matsushita, 2010, p. 3). The latter indicates elements impossible to measure with a paper test, but included as important parts of evaluation – for instance, attitude or character. For example, MEXT's explanation of «Undergraduate Competencies (Gakushi-ryoku)»

(http://www.mext.go.jp) is composed of three major items, with several substructures (Table 02).

1. Knowledge/Understanding	In addition to systematic understanding of basic knowledge in a specific major field, understanding of various and diverse foreign cultures, human culture, society, and nature
2. General-purpose skills	Skills required for intellectual activities as well as professional and social life Communication skills, numerical competence, information-technology literacy, logical thinking, and problem-solving skills
3. Comprehensive learning and its application	The ability to utilize comprehensively the knowledge, skills, behaviors, and other experience acquired to date, in order successfully to apply such experience to solving new issues

After the 2000s, Japanese universities' trend of adopting the new concept of abilities, practical use of knowledge, and spontaneously participating in learning activities became important traits to cultivate in university education. This change coincided with the rapid diffusion of ICT beginning in the late 1990s. In addition to the new concept of abilities (Table 01), around this time, 21st-century skills and key competencies were often mentioned as abilities to acquire through university education. Both explicitly refer to the importance of the ability to handle ICTs and digital networks. All of these abilities tend to be collectively referred to as generic skills.

Accompanying changes in abilities, new learning methodologies have been developed. One aiming to develop the generic skills above, active learning, was adopted at the initiative of the Japanese government around 2012. It was promoted in university education, often with numeric targets of adoption. According to the Qualitative Conversion Report by MEXT, active learning is a process in which students are involved in activities such as «discovery learning, problem solving, experiential learning, survey learning, etc. It includes group discussion in the classroom, debate, group work, etc.» (www.mext.go.jp). The report describes active learning as outcomes-based activities to foster «generic ability including cognitive, ethical, and social skills; education; knowledge; and growth of experience» (Ibid). According to a survey report by MEXT (www.mext.go.jp), the percentage considering introducing active learning into the undergraduate curriculum increased from 55% (2012) to 62% (2013)[4].

The definition of active learning remains controversial and, consequently, the term «active learning» will be removed from the K-12 course of study in 2020. But university education still refers to it as an attempt at educational reform. It expects

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[4] The survey was conducted from December 2014 to January 2015, and 762 Universities responded.

to overcome passive learning, such as just hearing one-way lectures designed for the transmission of specific knowledge (Mizokami, 2015, p. 32). It not only aimed to fix and confirm the knowledge learned in lectures with practice or experiments but also aimed to create new contexts by applying the knowledge learned that students in advance on their own (Ibid.). Following the classification of above, flipped classrooms, blended learning, PBL (Project-Based Learning/Problem-Based Learning), and workshops are positioned at universities as elements of advanced active learning.

Furthermore, introducing new methods of education/learning and utilizing ICT for reformation, as mentioned above, are part of Faculty Development (FD). In 1998, the University Council indicated the need for Faculty Development in a report titled, «How should Higher Education Institutions in Japan be in the 21st century? Proposals of Reform Plans». Thus in 1999, Faculty Development became a mandatory effort; then in 2008, it became an obligation based on revised University Establishment Standards. With the latter as a trigger, many universities founded specialized divisions/centers for educational reform.

7. Perspective on Examination of Data

Against these the new concept of ability's characteristics, there have been various counter reactions. However, the most repeated is that the new concept of abilities strongly reflects the intention to build some of a neoliberal global economy. In this situation, educational transformation is considered erosion from third capitalism. In this same context, Hall and Winn mentioned, «the actors, such as private equity firms, hedge funds, think tanks, consultancies are attempting to reshape the terrain of HE for profit» (Hall & Winn, 2017, p. 1). Certainly, for Japanese universities, the same strategy dramatically increased, especially for nontenure posts, as Hall and Winn mentioned, «increasing performance management within and across institutions Higher Education is increasingly unaffordable, its historic institutions are becoming untenable, and their purposes of HE became overwhelmingly instrumental» (Hall & Winn, 2017, p. 2).

On the other hand, Hall and Winn also pointed out that alternative models for organizing higher education are emerging, models that reimagine the university democratically and cooperatively (Hall & Winn, 2017, p. 2). To explore implications for leadership, not just within the university but also in terms of higher education's relationship to societies, it is important to consider how the university captures the concept of «mass intellectuality», «which is valorized by capital but also refers to that same knowledge's immanent (negative) and prefiguratively (positive) critical and reconstructive potential for new forms of sociality» (Hall & Winn, 2017, p. 3).

This point should be checked against the real situation in university education by examining what points are symbolically represented in syllabi data. More concretely, does the educational aim and content substantiate the intent to cultivate not only an individualized and customized but standardized ability encouraging the nature of the «self-satisfied man who shut himself off from any external court of appeal; not to listen, not to submit his opinions to judgment, not to consider others' existence» (Ortegay, 1930, p. 67)? Or, does it pursue an alternative horizon opening the dialog

of thinking, as Vilno mentioned, in the «non-state run public sphere» where activities' aims do not link directly to labor (Ortegay, 1930, p. 67)? Besides checking this point, whether elements of nonspecialized education that include facets of the new concept of ability and/or methodologies contains the contextual factor of seeking counter-hegemony represented by the notion of «the multitude» should also be examined. That is, to what extent or in what context, are subjects aware of the third or cognitive capitalism and of attempts to domesticate it as a characteristic of the subjects.

The important point is that the contemporary multitude pursues a «common place» where most general and abstract linguistic structures are becoming instruments for orienting one's own conduct (Vilno, 2004, p. 37). This would be an opposite form of the modern subspecies seeking to create «special places» where only «certain people» can possess a «sectorial ethical-communicative code» (Vilno, 2004, p. 37) that turns into a social hierarchy.

Based on the assumptions above, the author examines some syllabi resources and inspects what is actually mentioned. At first, the author tried to collect syllabi data from three universities positioned at the top or near the top with different resources in Japan's Kanto region (Table 03). This action proved quite difficult, especially collecting syllabi records that contained only keywords expressing the new concept of abilities, new methodologies of learning, and utilization of ICT (listed in Table 04). To collected syllabi data, the author applied qualitative analysis, carefully reading the context of the contents. For National University 1, the author attempted to collect syllabi online but was unsuccessful in doing so and instead acquired the paper syllabi. For National University 2 and Private University 1, the author checked the syllabi available on the websites and collected the data from them. The total number of collections of syllabus record was 223.

Table 03. Syllabus Data from 2018

University	National University 1	National University 2	Private University 1
Data Resource	Hard copy syllabus	Web Syllabus	Web Syllabus
School Year	Under Graduate 1, 2	Under Graduate 1, 2, 3, 4	Under Graduate 1, 2, 3, 4
Assumed Parameter (Number of lectures)	4408	3604	10517

Table 04. Keywords for Data Collection

Upper Concepts New Concept of Ability	Literacy, competency, career development, fundamental competencies for working persons (*Shakai-jin-kisoryoku*), undergraduate competencies (*Gakushi-ryoku*), master's degree level of ability and skill (*Shushi-ryoku*), generic skills, 21st-century skills

Subordinate concepts (Assumed to compose the elements of New Concept of Ability)	cognitive faculty/critical thinking (*Shikō-ryoku, Hihanteki-Shikō-ryoku*), reading comprehension (*Dokkai-ryoku*), writing academic report (*Report Sakusei-ryoku*), foreign language skill (*Gogaku-ryoku, Gaikokugo-kanren-nōryoku*), designing the lecture (*Jyugyo-sekkei-ryoku*), acquiring basic knowledge (*Kiso-chisiki-no-Kakutoku-ryoku*), understanding (*Rikai-ryoku*), presentation (*Happyō-ryoku*), ability to take action (*Kōdō-nōryoku*), analysis of information/data (*Jōhō-bunseki-ryoku*), problem solving ability (*Mondai-kaiketsu-ryoku*), imagination (*Sōzō-ryoku*), self-actualization (*Jikojitsugen-ryoku*), skill and ability for scientific research (*Chosa-kenkyu-ryoku*), information utilization (*Jōhō-katsuyō-ryoku*), sociable (*Ningen-ryoku*), communication skills, global human resource development, leadership Global human resources (*Grobal-jinzai*), global personnel, finding the issue (*Mondai-hakken-ryoku*), leadership, discussion skill, learning ability (*Gakusyū-ryoku*)
New Methods or Elements of Teaching and Learning	workshop, active learning, interactive lecture, cooperative/collaborative leaning (*Kyōdō-gakushū*), group work, problem/project-based learning, flipped classroom, fieldwork, co-op education
Other ICT-related Keywords	ICT, digital, digital book, e-learning, LMS, computer, tablet, twitter, Facebook, mobile, internet, SNS, digital tools
Other keywords checked	Cooperate with the industrial world, command of English, entrepreneurship, international standard, industry-academia collaboration, public, diversity,

As part of Subordinate Concepts, New Method or Element of Teaching and Learning and Other ICT-related Keywords, Table 04 contains a series of similar keywords. For example, the term «Workshop» includes «analytical workshop», «workshop format», «participatory workshop», «design workshop», «innovation workshop», and «practical workshop».

8. Qualitative Data Analysis Including the Keywords «New Concept of Ability», «New Method of Learning», and «ICT»

In the following section, several points that seem symbolically associated with the previous sections' discussion are emphasized. These are the main findings from the classification and context of collected records.

It was symbolic that private university 1 had 51 lectures with mostly the same content and that all of them mentioned at least 18 abilities and skills in line 1 (Upper Concepts) and line 2 (Subordinate Concepts), as shown in Table 04. Descriptions of these lectures are summarized as follows.

The aim of the lecture is to understand how important it is to acquire global competencies for the STEM field. Acquiring global competencies is equivalent to

acquiring graduate/master attributes and global fundamental competencies for a working person. The lecture also targets students' prospective career design while helping them understand the importance of communication skills, problem solving ability, organizational behavior ability, imagination, and self-actualization.

For the author, it seems that this curriculum swallowed all the keywords of the new concept of ability in an attempt to provide what the outside world expects (e.g., the governmental, industrial worlds).

For Upper Concept, 35 records include «literacy» related to mastering basic computer skills, for instance, office applications, statistical analysis tools, and installation of antivirus software. Approximately half the records established practical use of digital tools for students' academic/social activities and understanding of ICT devices' safe use. For other records, academic contexts were emphasized – literacy for social surveys and for understanding a discipline's academic background; attitudes essential to academic research; and media, health, or science literacy. These «literacy» records demonstrate that students are supposed to understand what already exists in the world, such as the frame of society or academic way of thinking and are not much expected to create something new context.

Besides the lecture series with over 18 abilities and skills mentioned in the syllabi at private university 1, for records that contain Subordinate Concepts, several lectures seem to have just arranged keywords for the new concept of ability. More specifically, in some cases, the lecture's aim tends not to fit its method and content. For example, some lectures explain that «through small groups» and «collaborative learning», students will acquire skills of «logical thinking» and «good communication». The lecture also aims for students to acquire basic skills needed in science communication by sharing information and communicating with others. At a glance, the words align with the keywords mentioned in university reform but for the author they seem to be disjointed from the context.

In another Subordinate Concept, «critical thinking» (24 records) was highly linked to the group of «New Method or Elements of Teaching and Learning» (rate of co-occurrence: 83.3%), with especially a high «group work» rate (62.5%). Although in some cases, understanding the context is difficult, other lectures actually mobilize the new concept of ability – not just quoting fashionable terms, but demonstrating an original academic position. In such cases, the relationship between lecture content and applied methods is clearly stated in an advantageous way by using trendy academic terms. For example, the lecture related to medical care described a context at the beginning for why proficient «communication skill» is required and why the lecture applies a specific learning methodology, for example, «problem-based learning». These cases are configured to expand students' perspective.

For «New Method or Elements of Teaching and Learning», the author found the data that several classes aim to produce innovation itself through «workshop» type or «project-based learning». These lectures' aims are to foster human beings with the potential to create a new product, service, business model, or social system. In these lectures, the junction with «career development» in Upper Concepts (Table 04) is also apparent. Too, a certain number of lectures have visiting lecturers from various fields outside the university. As Honda pointed out, traditionally, the Japanese

educational world has long and purposely maintained distance from the industrial world. This implicitly indicates fragmentation between science and occupation, sometimes using the term and the context of the academic world's independence (Honda, 2009, p. 9), but as these cases above show, that distance will likely close.

Collected resources contained 52 records on «active learning». Over half mentioned the importance of «dialog», and approximately 40% contained the keyword «presentation (*Happyō-ryoku*)» from the Subordinate Concept group (Table 04). Approximately half of the descriptions including «active learning» applied that new methodology to activate discussion or dialog and tried, as a consequence, to promote better understanding of content. Other records include «active learning» were lectures for teachers' training courses. In this case, students are supposed to inculcate the concept of «active learning» itself as a new form of learning. In the former cases, students are mostly required to transform their thought into a concrete action, for instance, into going to fieldwork, speaking out during class discussion (often difficult for Japanese students), or creating some business or action plan with other students (some syllabi use the term «colleagues» instead of «classmates»). In the latter case, the lectures' aims were mentioned together with understanding ICT use, for instance, in e-learning, MOOC, and flipped classrooms.

The category of «Other ICT-Related Keywords» included related 58 records (Table 04). In these records, the co-occurrence rate of «group work» in the third line and «presentation» in the second line (Table 04) was relatively high, respectively 46.6% and 25.9%. Some lectures require students to bring their own devices for participating in discussion, both in- and outside the lecture; some lectures even require students to use Facebook for their discussion platform.

Although the author suspected that certain syllabi were aimed simply to express fulfillment of duty to express the keywords of New Concept of Abilities and related new methodology of learning invigorated ICT, as a result of reading syllabi records, several lectures definitely aimed to cultivate abilities and skills needed to become a future leader who could plan the social system itself.

Also, before classifying and reading data, the author expected many cases to contain elements underpinned by the industrial world's logic, but several expressed originality and initiative from the academic viewpoint. This paper reflects the first check of content of nonspecialized education with biased data, but the author obtained only three Kanto region universities' syllabi. However, for a broader, deeper examination, a considerable number of records should be checked if a tug-of-war between third capitalism and counter-hegemonic leadership is seen in the practice of the multitude.

9. Comparison with Highly Conscious Group

For reference, using the template of SPSS text analytics that the author created through the process of qualitatively analyzing university syllabi, the data of the mailing list (tentatively named «ML X») was checked quantitatively. ML X is the famous Mailing List, subscribed for those who have strong interest in university reform. For ML X, the author extracted the subscribed 3000 mailings from 2014/11/21 to 2018/01/04. The author has read of ML X since 2010 and has known that it contains

many data related to the new concept of abilities and ICT use in university education. Therefore, the author decided to examine what topics were mentioned by those with special interest in university reformation and associated with Faculty Development activities. The author positioned those on ML X as the Highly Conscious Group and examined keywords mentioned in the list.

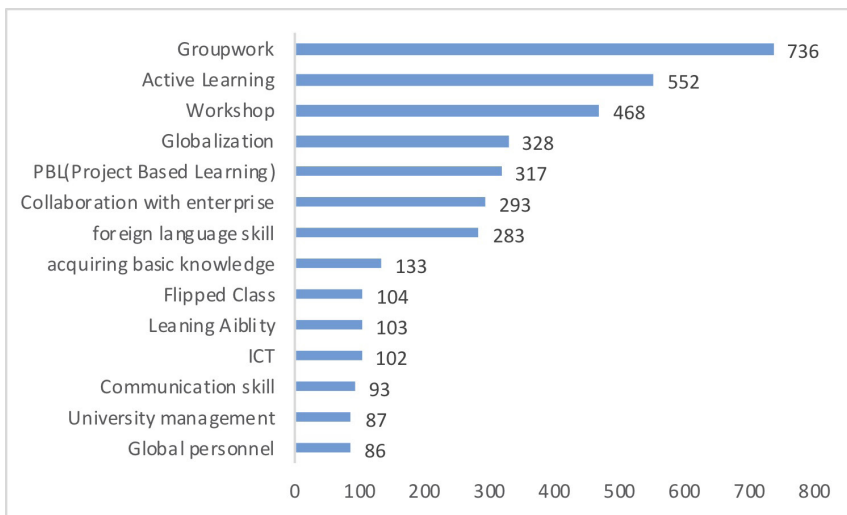**Figure 03.** Keywords most frequently mentioned

Figure 03 shows lists of keywords and numbers occupying the top 40% in the list of keywords in Table 04. Possibly, «Groupwork» and «Workshop» mean methods used in symposiums or lectures, not university education. However, this can be interpreted that faculty members also attempt to understand these methods' specifics. Additionally, it is impressive that many cases mentioned «globalization», «collaboration with enterprise», and «foreign language skill». Compared with contents of syllabi, elements related to commercialization of university education seems strong in this group, but to highlight the difference, further qualitative analysis is needed.

10. Risk of Losing Boundaries: Reconsideration of Higher Education's Meaning

Considering nonspecialized education of syllabi and ML X data for those who have great interest in university reform, the author would like to pay attention to the discussion covering the mode and characteristics of education/learning as represented by the terms «formal», «non-formal», and «informal». Contrasting usage of the same terms or keywords in different academic fields is very important because the technology of education and the philosophy of non-formal education illuminate politics surrounding university education and also connect the discussion

of how and for whom the university will be open and working as a learning commons in the future.

The former, educational technology is a relatively new field that is expanding with the usage of ICT, and researchers in this field are paying attention to the possibility of «informal learning». Yamauchi et al., referring to the definition given by the Organization for Economic Co-operation and Development (OECD), operationally defined the scope of «informal learning» as a learning activity outside of a formal classroom or semi/non-regular course in formal education, including learning activities such as at the museum or workplace, and project-based learning (PBL) in formal higher education. In this definition, «informal learning» and conventional non-formal learning like in social education and lifelong learning are bundled as «informal learning» in a broader sense to indicate all the learning activities outside of formal regular classrooms. When Yamauchi et al. described an increase of the appearance ratio of «informal learning» in their academic journal (from 19 papers published in 2002-2006 to 40 papers in 2007-2012), and they opened a discussion with that problem setting. For researchers in the field of educational technology, it is desirable that each learning element in different educational modes connects seamlessly for learners. Yamauchi wrote that such environments that transcend the differences between formal learning and «informal learning» can maximize the individual learner's potential (Yamauchi, 2016, p. 175).

On the other hand, researchers in non-formal education, in most cases, use «informal learning» in the context of tacit learning or unconscious learning and divide it from non-formal learning. In the context of non-formal learning, sometimes how to visualize a social unconsciousness (e.g., habitus) becomes important in improving the social situation for related parties who are, in many cases, placed in marginal social categories. To form «critical consciousness» (Freire, 1970), «interactive activities», like a «workshop» applied in that sphere, and the ability to «facilitate» are required to manage the place. That many keywords historically characterizing «non-formal education» like above have come to include nonspecialized university education, especially in the context of educational technology/engineering, deserves special attention.

As Rojers pointed out, «non-formal learning, although outside the educational establishment, is now mainstream and no longer marginal; it is an integral part of educational programs» (2014, p. 62). Therefore, observing what elements inside and outside the university is going to be connected by what kind of power balance is important. For university reformation in Japan, the power of discourses in educational technology field seems stronger. However, if we expect the university to be more than an institution merely assigning abilities and/or skills, we must reconsider the role of university as a «commons». In doing so, we must consider what learning activities and at what points the university attempts to merge with other sectors and vice versa. In other sectors, enterprises, nonprofit organizations (NPOs), and semi-public organizations like volunteer groups, social education is inherently included. Additionally, when analyzing each uniting and dividing phenomenon between sectors, we should keep an eye on which sector's political speculation is working to what extent in each learning activity and why (the mezzo point of view) and how people, who participate in learning activities are located at the mode's boundary, how they

interpret it, and how they coordinate their own (the micro point of view). In exploring points raised above, we have to carefully observe in which parts countermeasures have appeared, especially for those who have difficulties living in contemporary Japanese society while visualizing this new mechanism invigorated by ICT (from a macro viewpoint). From then, the role of the university contributing to the enrichment of the society has to be considered in detail.

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